

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKewed/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,827	03/14/2001	Viktor M. Hungerbuehler	33307	4452

116 7590 09/08/2004

PEARNE & GORDON LLP  
1801 EAST 9TH STREET  
SUITE 1200  
CLEVELAND, OH 44114-3108

EXAMINER

HUYNH, KIM T

ART UNIT PAPER NUMBER

2112

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/805,827

Applicant(s)

HUNGERBUEHLER ET AL.

Examiner

Kim T. Huynh

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-30 is/are allowed.
- 6) ☒ Claim(s) 31-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Receipt Acknowledgement***

1. Receipt is acknowledged of the request filed on 5/10/04 for a request for continued examination (RCE) under 37 CFR 1.114 based on the application No. 09/805827, which the request is acceptable and an RCE has been established. No claim has been canceled. Currently, claims 31-33 has been newly added and claims 1-30 are pending in this application.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olarig et al. (US Patent 6,587,909) in view of Ihara et al. (US Patent 6,212,580) and further in view of Nakamatsu et al. (US Patent 6,473,822)

As per claim 31, Olarig discloses a data acquisition module for a data acquisition system, comprising:

- Connecting means for removably inserting said module in a slot of the data acquisition system; (col.1, lines 42-63)
- A clock generating circuit for providing an internal clock signal; (col.8,line 67-col.9,line 36), (col.10, lines 12-18)

- A clock selecting circuit for selecting one of said internal clock signal as a clock signal for use by said module for data acquisition. (col.10, lines 12-18)

Olarig discloses all the limitations as above except each channel comprising at least analog input and at least one analog-to-digital converter for converting an analog input signal of said analog input into a digital signal. However, Ihara discloses the plurality of modules including an input module, the input module having a connector terminal from which an instrumental signal is supplied, wherein when the instrumental signal is an analog signal, the input module converts the analog signal into a digital signal indicating instrumental data. (col.2, lines 1-23)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Ihara's teaching into Olarig's system so as to provide an integrated recorder system in which a plurality of modules can be arbitrarily inserted in or withdrawn from the slots of the recorder main part, regardless of whether the module being inserted is the input module or the output module. (col.1, lines 63-67)

Furthermore, Olarig also fails to disclose synchronization input means for inputting a synchronization signal from a synchronization bus which adapted for connecting to a plurality of modules in system.

However, Nakamatsu discloses in bus 13, while each slot is equivalent for the signal within the bus, it is required that each slot operate

synchronously. Therefore, a specific slot is determined as a clock source and a clock signal from slot is distributed to the other clocks. (col.7, lines 17-32)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Nakamatsu's teaching into Olarig's system so as to provide an improved digital signal processing apparatus that overcomes the drawbacks of the prior art. (col.1, lines 41-48)

As per claim 32, Olarig discloses a data acquisition module for a data acquisition system, comprising:

- Connecting means for removably inserting said module in a slot of the data acquisition system; (col.1, lines 42-63)
- A clock generating circuit for providing an internal clock signal; (col.8, line 63-col.9, line 36), (col.10, lines 12-18)
- A clock selecting circuit for selecting one of said internal clock signal. (col.10, lines 12-18)

Olarig discloses all the limitations as above except each channel comprising at least analog input and at least one analog-to-digital converter for converting an analog input signal of said analog input into a digital signal. However, Ihara discloses the plurality of modules including an input module, the input module having a connector terminal from which an instrumental signal is supplied, wherein when the instrumental signal is

an analog signal, the input module converts the analog signal into a digital signal indicating instrumental data. (col.2, lines 1-23)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Ihara's teaching into Olarig's system so as to provide an integrated recorder system in which a plurality of modules can be arbitrarily inserted in or withdrawn from the slots of the recorder main part, regardless of whether the module being inserted is the input module or the output module. (col.1, lines 63-67)

Furthermore, Olarig also fails to disclose synchronization input means for inputting a synchronization signal from a synchronization bus which adapted for connecting to a plurality of modules in system. However, Nakamatsu discloses in bus 13, while each slot is equivalent for the signal within the bus, it is required that each slot operate synchronously. Therefore, a specific slot is determined as a clock source and a clock signal from slot is distributed to the other clocks. (col.7, lines 17-32)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Nakamatsu's teaching into Olarig's system so as to provide an improved digital signal processing apparatus that overcomes the drawbacks of the prior art. (col.1, lines 41-48)

As per claim 33, Olarig disclose all the limitations as above except wherein said synchronization input means is adapted to simultaneously plug in two removable connecting elements enabling said external synchronization signal to be transmitted from or to two adjacent modules in said module acquisition system. However, Nakamatsu discloses in bus 13, while each slot is equivalent for the signal within the bus, it is required that each slot operate synchronously. Therefore, a specific slot is determined as a clock source and a clock signal from slot is distributed to the other clocks. In addition, a construction in which an output from one differential input is supplied to the respective slots via the differential output for the number of the other slots, a clock signal is supplied in sequence. (col.7, lines 17-32)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Nakamatsu's teaching into Olarig's system so as to provide an improved digital signal processing apparatus that overcomes the drawbacks of the prior art. (col.1, lines 41-48)

***Allowable Subject Matter***

4. Claims 1-30 are allowable.

Applicant's claimed invention is deemed allowable over the prior art of record as the prior art fails to teach or suggest wherein at least one connector, different from said connecting means makes it possible to plug in a removable connecting element on a second external side of said module different from the first side in order to connect said module to a synchronization bus connecting several modules in said system, said



connection being effected independently from the insertion of said module into said slot, in combination with other limitations as recited in independent claims and further in view of the specification and applicant's arguments.

***Response to Amendment***

5. Applicant's amendment filed on 5/10/04 have been fully considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (571)272-3635 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 9:00AM- 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (571)272-3632 or via e-mail addressed to [mark.rinehart@uspto.gov]. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2100.

Kim Huynh

Sept. 2, 2004

*Gopal C. Ray*  
GOPAL C. RAY  
PRIMARY EXAMINER  
GROUP 2800